

Lab Assignment



Cybersecurity Professional Program
Introduction to Python
for Security

Data Types & Conditions

PY-02-L4
Dictionary Lab



Lab Objective

Understand how to work with dictionaries and how to retrieve their content.



Lab Mission

Practice using a dictionary that stores predefined data that a user can randomly request.



Lab Duration

10–20 minutes



Requirements

- Knowledge of how to handle input from the user.
- Working knowledge of variables and dictionaries.



Resources

- Environment & Tools
 - Windows, Linux, MacOS
 - Python 3
 - PyCharm



Textbook References

- Chapter 2: Data Types & Conditions

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- Section 1: Variables and User Output
 - Section 3: Conditions
 - Section 4: Advanced Data Structure

Lab Task

Construct an interactive script that returns which service is associated with which port number.

For example:

```
For which protocol would you like to know the port number?  
FTP
```

```
The port number for protocol FTP is 21!
```

- 1 Create a dictionary named **ProtocolsDict** that will hold the following keys and values: {FTP: 21, DNS: 53, LDAP: 389, MySQL: 3306}

```
ProtocolsDict = {'FTP': '21', 'DNS': '53', 'LDAP': '389',  
'MySQL': '3306'}
```

- 2 Create a variable named **question** that will ask the user for the name of a service using the input() function.

```
question = input("For which protocol would you like to know  
the port number?")
```

- 3 Create a condition to check if the value in the **question** variable exists in the dictionary. It should be checked against the dictionary's key list.

```
if question in ProtocolsDict.keys():
```

- 4 Select a value from the dictionary with the question variable as a key.

```
if question in ProtocolsDict.keys():  
    answer = ProtocolsDict[question]
```

- 5 Print a message displaying the port associated with the selected service.

```
if question in ProtocolsDict.keys():  
    answer = ProtocolsDict[question]  
    print("The port number for protocol " + question + " is  
" + answer + "!!")
```

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- 6 Finally, if the condition is not met, print a message stating that the protocol cannot be found.

```
else:  
    print("The protocol can't be found")
```